

Attorney Docket No.: RU-0175
Inventors: Eric Lam
Application No.: PCT/US00/15783
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In the claims:

Please amend the claims as follows:

Beginning at page 32, line 16, with the following:

25.(amended) A method for inserting a heterologous DNA molecule into a pre-determined location on a plant genome, which comprises;

a) transforming a sample of plant cells containing the genome with the DNA construct of Claim 24, to produce a substrate-transformed cell line;

Q' b) transforming an equivalent sample of plant cells with a gene encoding a transposase that specifically acts on the DNA substrates in the DNA construct of claim 24, to produce a transposase-transformed cell line;

c) regenerating fertile organisms from each of the transformed cell lines;

d) crossing the substrate-transformed line with the transposase-transformed line to produce F1 progeny;

e) self-pollinating the F1 progeny to produce F2 progeny; and

f) growing the F2 progeny in the presence of the positive selection agent and the negative selection agent, progeny

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Q¹ plants comprising the heterologous DNA inserted into the pre-determined location on the plant's genome being capable of surviving in the presence of both the positive selection agent and the negative selection agent.

[Beginning at page 33, line 7, with the following]

26.(amended) The method of Claim 25, which further comprises selecting a substrate-transformed cell line comprising one copy of the DNA construct per cell.

Beginning at page 33, line 11, with the following:

28.(amended) The kit of claim 27, which further comprises a DNA construct having a gene encoding a transposase that specifically acts on the DNA substrates in the DNA construct.

Q² [Beginning at page 33, line 23, with the following]

29.(amended) A method for activation tagging of a plant genome to create variants displaying a desired phenotype, which comprises:

a) transforming a sample of plant cells containing the genome with the DNA construct of claim 1 or claim 24, to produce a substrate-transformed cell line;